INTERNAL AUDIT
CONTROLS EVALUATION
FIRE-EMS - FUEL MANAGEMENT

December 3, 2001

Roanoke City Council Audit Committee
Roanoke, Virginia

We have completed an audit of the Fire-EMS Department's fuel management processes. The audit was performed in accordance with government auditing standards.

BACKGROUND

The Fire-EMS Department operates fourteen stations throughout the City, with its administration offices in the Jefferson Center. Five of the Fire-EMS stations have self-serving fuel pumps and underground storage tanks with diesel fuel. These fuel pumps and underground storage tanks remain locked and the keys are kept in the stations. The Fire-EMS staff records the fuel they pump on the station's fuel-tracking log and day logbook. At the end of each month, Fire Administration forwards the fuel-tracking logs to Fleet Management, where they enter the number of dispensed gallons and the odometer readings into the Maintenance Control Management System (MCMS). Fire-EMS vehicles can also obtain fuel at any of the City's Gasboy sites (Public Works, Parks & Grounds, and Utility Lines Services). These sites are computerized and electronically post fuel data into the MCMS.

The Fire-EMS stations dispensed approximately 17,000 gallons of fuel to 36 vehicles and equipment from January 2001 to June 2001. The Fire-EMS stations receive their diesel fuel from local distributors, who are selected based on availability and lowest bids. Fuel is stored at each site in underground storage tanks, which are regulated by the Department of Environmental Quality (DEQ). Building Maintenance monitors the tanks on a monthly basis using vapor monitoring. Vapor monitoring measures fuel fumes in the soil around the underground storage tank in order to detect leaks.

PURPOSE

The purpose of this audit was to verify that fuel usage and fuel inventory processes are well controlled and verify compliance with fuel storage laws.

METHODOLOGY

We gained an understanding of the fuel inventory and fuel usage process through a review of existing documentation and interviews with Fire-EMS, Building Maintenance, and Fleet Maintenance. Based on the information, audit tests were developed to

evaluate the operation of controls.

SCOPE

We reviewed controls over fuel management as of June 30, 2001. We analyzed fuel use over the six-month period ending June 30, 2001 based on data availability.

RESULTS

During our evaluation of controls, we noted all Fire-EMS stations passed the required leak tests and the Fire-EMS stations had adequate physical security over the fuel pumps and underground storage tanks. However, we did identify the following areas which would improve the overall internal controls system.

Finding 01

Fuel usage is not satisfactorily monitored at the Fire-EMS stations and at the administration level. There is no established documented procedure to verify all fuel is accounted for on the fuel-tracking log. Fire Administration management is not provided with a miles per gallon report and does not have procedures for identifying and investigating miles per gallon that are outside a defined 'normal' range. There is a possibility that the fuel-tracking log and MCMS could have incomplete or erroneous data.

Recommendation 01

The Fire-EMS stations should no longer be required to perform daily stick tests and complete the monthly inventory worksheet. The monthly vapor monitoring tests performed by Building Maintenance satisfies EPA/DEQ requirements.

Fire-EMS personnel should establish a new log to aid in reconciling the usage per totalizers to the existing fuel tracking log. In this new log, they will record the beginning and ending totalizer readings on the fuel pumps and the difference between these two values will determine the amount of fuel pumped from their station daily. This amount will be reconciled to the fuel-tracking log to determine if all of the dispensed fuel has been recorded for entry into MCMS. This verification process will allow the fuel data to be checked for completeness and accuracy.

In addition, Fire Administration should establish an acceptable range of miles per gallon according to vehicle type. Once Fleet Management begins issuing miles per gallon reports, the Fire Administration should review the miles per gallons and follow-up on vehicles that fall outside of their established range.

Management Response 01

Fire-EMS will utilize the new log to determine the amount of fuel dispensed during each shift. At the end of each month the fire stations will forward the new log along with the fuel-tracking log to the Fire Administration. Once Fleet Management begins issuing miles per gallon reports, the Fire Administration will establish an acceptable miles per

gallon according to vehicle type. Fire Administration will review the miles per gallons and follow-up on vehicles that are not within 20% of the established miles per gallon.

Finding 02

When the Fire-EMS stations receive fuel from a vendor, they are not consistently monitoring the fuel deliveries for accuracy and do not have a defined tolerance level for contesting the vendor's bill of lading.

Recommendation 02

Develop a standard operating procedure to ensure all deliveries are monitored for accuracy. Establish a defined tolerance level when a located difference is detected between the Fire-EMS personnel's stick measurement and the vendor's bill of lading.

Management Response 02

The Fire-EMS Department has created a fuel receipt log to track the accuracy of fuel deliveries and has established a defined tolerance level of ten gallons for contesting the vendor's bill of lading. When the Fire-EMS stations receive fuel from a vendor the Fire-EMS personnel will perform a stick measurement on the fuel in the underground storage tank and note the measurement on the fuel receipt log. After the fuel is delivered, the Fire-EMS personnel will again perform a stick measurement and note the measurement on the fuel-tracking log. The Fire-EMS will determine the amount of fuel received and compare it to the vendor's bill of lading to ensure the proper amount of fuel has been received.

CONCLUSION

The fuel usage and fuel inventory processes are not sufficiently controlled. The Fire-EMS stations are in compliance with fuel storage laws.

We would like to thank the cooperation of the Fire-EMS's personnel during the audit.

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